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ABSTRACT

Using two complimentary data sets, the National Longitudinal Study of the High School Class of 1972 and the Study of Academic Prediction and Growth, the conventional interpretation of educational plans as motives and thus determinants of educational attainment is questioned. It was found that when questioned about their educational loans: (1) as many as 20 percent of youth supply extemporaneous responses; (2) another 20 percent report goals of quite recent formulation; and (3) the remainder report long-term commitments (of at least two to five years). The last are so long-standing as to make suspect the causal ordering used in most models of adolescent attainment. That is, such plans are not properly considered as the products of high school experiences. It is also documented that senior year measures of educational goals are often quite contaminated by prior knowledge of one's actual prospects for college. Finally, the analyses make suspect the assumption that educational plans reflect exclusively, or even primarily, underlying motivation or achievement orientation. This finding makes it difficult to sustain the customary interpretation of the influences of student "plans." (Author/MSE)

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THE MOTIVATIONAL RELEVANCE OF EDUCATIONAL PLANS: QUESTIONING THE CONVENTIONAL WISDOM

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The Motivational Relevance of Educational Plans: Questioning the Conventional Wisdom

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Introductory Statement

The Center for Social Organization of Schools has two primary objectives: to develop a scientific knowledge of how schools affect their students, and to use this knowledge to develop better school practices and organization.

The Center works through four programs to achieve its objectives. The Policy Studies in School Desegregation program applies the basic theories of social organization of schools to study the internal conditions of desegregated schools, the feasibility of alternative desegregation policies, and the interrelation of school desegregation with other equity issues such as housing and job desegregation. The School Organization program is currently concerned with authority-control structures, task structures, reward systems, and peer group processes in schools. It has produced a large-scale study of the effects of open schools, has developed Student Team Learning Instructional processes for teaching various subjects in elementary and secondary schools, and has produced a computerized system for school-wide attendance monitoring. The School Process and Career Development program is studying transitions from high school to post secondary institutions and the role of schooling in the development of career plans and the actualization of labor market outcomes. The Studies in Deliquency and School Environments program is examining the interaction of school environments, school experiences, and individual characteristics in relation to in-school and later-life deliquency.

This report, prepared by the School Process and Career Development Program, questions the conventional interpretation of educational plans as determinants of educational attainment.

ABSTRACT

Employing two complementary data sets, the National Longitudinal Study of the High School Class of 1972 and the Study of Academic Prediction and Growth, we question the conventional interpretation of educational plans as motives, and thereby as determinants of educational attainment. We find that when questioned about their educational plans: (1) perhaps as many as 20 percent of youth supply extemporaneous responses; (2) another 20 percent report goals of quite recent formulation; and (3) the remainder report long term commitments (at least 2-5 years). The last are so longstanding as to make suspect the causal ordering employed in most models of adolescent attainment. That is, such plans are not properly considered as the products of high school experiences. We also document that senior year measures of educational goals often are quite contaminated by prior knowledge of one's actual prospects for college. Finally, our analyses make suspect the assumptions, first, that educational plans are homogeneous in their information across students and assessments and, second, that they reflect exclusively, or even primarily, underlying motivation or achievement orientation. Without these assumptions, it is difficult to sustain the customary interpretation of plans' "influences."

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The Motivational Relevance of Educational Plans:

Questioning the Conventional Wisdom

The relevance of motivations for attainments has been a longstanding interest among social-psychologically oriented students of stratification (Crockett, 1962, 1966; Lipset and Bendix, 1959; Simpson, 1962). In recent years, the work of Sewell and his various colleagues (Sewell, Haller and Ohlendorf, 1970; Sewell, Haller and Portes, 1969; Sewell and Hauser, 1975) has afforded a cogent organization of these concerns. Within their framework (the so-called "Wisconsin" model), goal-orientations, specifically educational plans and occupational aspirations, constitute important resources for status attainment, and numerous studies have demonstrated their potency both as mediators of the influences of background characteristics and prior educational experiences and as independent determinants of attainment outcomes (for relevant comments and review, see Kerckhoff, 1976; Shea, 1976; Spenner and Featherman, 1978). Such research has amassed impressive evidence for the importance of goal-orientations in status attainment.

As plausible as these conclusions might seem, however, there is good reason not to accept them uncritically, for these evaluations of the attainment relevance of motives actually are distressingly crude. Typically, the predictability of outcomes (e.g., educational level) from declared intentions (e.g., educational plans) is interpreted, net of other pertinent variables, as the extent to which goals impel one toward attainments.

Clearly, however, expressions of intent or expectation might be dictated by many considerations, and in the extreme case might bear little relationship to students' underlying ambitions (Kerckhoff, 1976). They could, for example,

be but vague preferences, flights of fancy conjurred up on the spur of the moment, merely reports of a foregone conclusion known practically since birth, or realistic appraisals of the likely course of events. The last of these might be especially likely when expectations are measured, as is quite common, close to some important educational transition, as in the senior year of high school. As informed observers of the circumstances in which they find themselves, youth by this time appreciate reasonably well their actual prospects for college attendance (Kerckhoff, 1977). However useful their being able to forecast their educational and labor market fortunes might be, the forecast itself might bear little more responsibility for what eventuates than does the meteorologist's anticipation of fair or foul weather.

Even the best of status attainment research is suspect along these lines. Consider, for example, Duncan, Featherman and Duncan's (1972) chapter on "Aspirations and Motives." It is commendable that they at least acknowledge these difficulties with plans information, being one of the few studies in this literature to do so, but their own empirical exercises hardly improve upon what they identify elsewhere as "naive analysis" (P. 148). Although their models distinguish the conceptually interesting, but unobserved, variable "motivation" from the data on plans and aspirations that are used to index it, what might not be apparent in the complexity of their analysis is that their conclusions about motives actually are conclusions about plans and aspirations, but in another guise (Burt, 1973). Their procedures <u>assume</u> that motives are the primary determinants of plans. If this is mistaken, so too are their substantive conclusions. In this light, the "elusiveness" of their pursuit takes on a somewhat different connotation (Duncan, Featherman and Duncan, 1972: 163):

> "Perhaps enough has been said to suggest that there is no intention here of making a contribution to the theory of motivation. The much more modest goal of making some plausible assessment of how motivation may influence achievement is elusive enough."

Their modeling exercises actually are heavily laden with theory, if only implicitly so. Since the data themselves won't reveal whether it is "motivation" that influences achievement in their analysis, it is unclear exactly how even their "modest" goal can be accomplished, or certainly its success assessed, without a more secure grounding in the sort of conceptual clarification that they foreswear (Duncan, Featherman and Duncan, 106-7). What, then, are the other possibilities that might be reflected in statements of students plans? We actually have very little guidance from the available theoretical literature, but several pertinent themes can be culled from a widely scattered material on vocational development and career aspirations. These all stand apart from the conventional interpretation of plans as motives.

In evaluating the likelihood that the nursing students they studied would actually complete their program of study, Katz and Martin (1962) found that those who had decided upon this career at a young age (before 16) and had thought seriously about it even earlier (before age 10) had a much higher success rate than those who came upon their "commitment" much later. They suggest that longstanding plans, grounded in a history of relevant socialization, may be fundamentally different from similar expressions with far less secure foundations, with the former reflecting a subjective career commitment and the latter being but situationally specific and thus highly volatile. Accepting this distinction, it is but a short step to the possibility that many youth may be

lacking in intentions of either sort. Again, there are suggestions in the literature to this effect.

Much vocational development research, for example, indicates that the occupational aspirations of high school seniors are prone to be unrealistic and fantasy-based (Gribbons and Lohnes, 1968). On the basis of such evidence, Jordaan (1974) has concluded that barely half the research population of the well-known Career Development Study even were engaging in, much less accomplishing, age appropriate developmental tasks of the sort anticipated in theories of vocational development. Similarly, Hilton found (1971:42) that as many as twenty-five percent of eleventh graders from the ETS project used in this report had not even seriously considered their vocational careers.[1]

It also has been suggested, as a final consideration, that some ambitions might as readily be the consequences of career outcomes as their precursors. Roberts (1968) has argued this perspective forcefully. Rejecting the traditional emphasis on motivations in the career development literature, he concludes that "Ambitions are anticipations of the direction that careers are going to take. They are products of occupations that individuals are in the process of entering rather than determinants of the patterns that careers take (our emphasis)." In his perspective, aspirations are nothing more than the subjective representation of the opportunity structure that dictates the course youths' careers will follow.

These perspectives on career intentions may also apply to educational plans. Longstanding plans may reflect greater commitment and motivation than those of shorter duration, although even here the "plans as motives" interpretation is not entirely secure. For example, students who have expected to go to college since early in their academic careers may simply be reflecting the realities of their favored socioeconomic circumstances rather than any internalized drive toward

high attainments. This necessary caveat aside, however, attributing motivational relevance to longstanding plans probably is, at least in general, more reasonable than doing so to all plans indiscriminately or to intentions which have yet to stand the test of time.

The extent of prior knowledge regarding the likely course of events also may be relevant to the meaning of "plans," in this instance distinguishing simply factual reports from indicators of underlying dispositions. This particular uneasiness regarding data on educational expectations at least has been acknowledged in the substantive literature (Alexander, Eckland and Griffin, 1975), but its implications have yet to be fully developed.

Finally, here too we perhaps need be more sensitive to the ways in which our procedures structure what our research seems to reveal about the world. In asking about educational or occupational plans and receiving responses within the framework provided, we run the risk of attributing much greater significance to those answers than they hold for the respondents themselves. The career development literature cited earlier indicates that many youth, even as late as the senior year of high school, are woefully ignorant of the world of work and have reflected but sparingly, if at all, on their long-term academic and career interests. Answers given merely to fulfill the implicit social contract of the research situation could well be virtually devoid of meaningful content, but mistakenly would be accorded motivational relevance commensurate to that of even the most longstanding and intense ambitions.

The stated intentions of any particular student could, of course, be determined exclusively by any one of these possibilities, by some combination of all of them, or even by some other considerations altogether, for this is by no means an exhaustive accounting. Each, however, at least is plausible and, unfortunately, not

distinguishable from the others on the basis of the simple responses elicited in the typical survey research situation. The analyses that follow admittedly are far from conclusive, yet in our estimation they at least make suspect the assumptions implicit in most applications of such plans data:

1. That plans reflect exclusively, or even primarily, motivational dispositions or achievement orientations;
2. that they do so similarly across all students;
3. that they do so similarly throughout the school years.

METHOD

Two data sets are used in these analyses. The Educational Testing Service's Academic Growth Study (ETS) provides information on educational plans measured in the seventh, ninth, eleventh and twelfth grades and college application and admissions statuses at the time of the senior year survey. The National Longitudinal Study of the High School Class of 1972 (NLS) has available comparable senior year data, as well as actual college enrollment information up to three years after high school graduation. Thus, these two data sets complement one another, with the ETS file providing pre-senior year data and the NLS project including a valuable post-high school follow-up.

The NLS Data Set

The National Longitudinal Study (NLS) of the High School Class of 1972 is an on-going project sponsored by the National Center for Educational Statistics. The present report uses base-year and first- and second-wave follow-up data from the NLS.

The NLS employed a two-stage probability sample with schools as first stage sampling units and students as second stage units. A maximum of eighteen students, randomly selected, was surveyed within each school. The base-year questionnaire and a 69-minute test battery were administered in the spring of 1972 to 16,683 seniors who were enrolled in 1,070 public, private and church affiliated secondary schools throughout the United States. Schools that were located in low income areas or that had a high proportion of minority student enrollment were sampled at approximately twice the normal sampling rate in order to obtain an adequate representation of minority students.

The first follow-up survey was conducted between October 1973 and April 1974. Of the seniors who had participated in the base-year survey, 94 percent completed the first follow-up questionnaire. A second follow-up was conducted in the fall of 1974 with a similarly high success rate. The sample used in this report is limited to black and white respondents, with our maximum effective case base being approximately 14,500. The differing sample sizes reported in our tables reflect attrition due to missing data on the items used in particular analyses, with the educational plans variable itself being a major cause of such case loss.

Educational Attainment is measured as a dichotomy reflecting whether or not the respondent attended a two or four year college or university, full- or part-time, at any time during the period covered by the two follow-up surveys (through October of 1974).[2]

Educational Plans is measured with an item from the senior year survey asking the highest level of education the respondent planned to obtain. The six response options (ranging from "less than high school graduation" to "go to a graduate or professional school after college") were collapsed to parallel the "college" - "no

college" dichotomy of the attainment measure. Although this coding does not exploit the full range of information available in the original item, such a dichotomy is convenient for cross-tabular comparisons and it corresponds to the coding of our attainment criterion.

Duration of Plans is measured retrospectively from a single item in the senior questionnaire worded as follows: "When did you first decide whether you would go to college or not?" The five response options available were combined into four for analysis: 1) before the 10th grade; 2) in the 10th or 11th grade; 3) in the 12th grade; 4) still undecided. Many students responded "undecided" here but nevertheless provided a codable response on the plans item itself (for which there was no "undecided" option). We later will separate out this group as one whose "educational expectations" may have little substantive import.

Senior Year Application and Acceptance Statuses also were measured with items from the base-year survey. The first asked "Have you applied for admission to any college or university?"; the second, "Have you been accepted by any college or university?" Response options again were dichotomized, here to reflect "yes" (coded 1) and "no" (coded 0) distinctions. Additionally, many respondents were directed around this entire series of items based on an earlier routing question regarding their anticipated primary time commitment in the year after leaving high school. Students directed around the section on postsecondary schooling were assumed not to have applied to college and hence were assigned scores of zero on these measures of application and acceptance status.

Our cross-tabular analyses focus on the variables just described. We also report some regression analyses which include as well the following measures, all obtained from the senior survey unless noted otherwise:

Race, with blacks coded "1" and whites "0";

Mother's and Father's Education, scaled in years;

Father's Occupation, scored in the metric of Duncan's SEI;

Acquisition Index, the simple sum of 10 household possessions;

Sex, with women coded "1" and men "0"

Aptitude, a summated composite of standard scores from four of the six subtests of the NLS test battery;

Curriculum Enrollment, scored as a "college preparatory" ("1") -- "non-college preparatory" ("0") dichotomy with information from school records when available, otherwise from student reports.

Most of these variables are described more completely in Thomas, Alexander and Eckland (1979).

The ETS Data Set

The data employed here are from a subset of the sample included in the Study of Academic Prediction and Growth conducted by the Educational Testing Service (see Alexander, Cook, and McDill, 1978; and Hilton, 1971, for a description of the sampling procedures). Students included in the present analysis come from ten comprehensive (as opposed to vocational) high schools in three large urban school districts across the United States where they were seniors in 1968-1969. The ETS design entailed a series of repeated cross-sectional surveys of fifth, seventh, ninth, eleventh, and twelfth graders in alternate years from 1961 through 1969. Those students present across waves of data collection can be studied as a panel. At different points in the analysis we will employ portions of (1) the seventh through twelfth grade panel; (2) the eleventh through twelfth grade panel; and (3) the twelfth grade cross-sectional sample. Again, students with missing

data on variables required for a particular analysis are excluded from that analysis.

Educational Plans in the seventh, ninth, and eleventh grades were obtained from questionnaires administered in the falls of 1963, 1965, and 1967, respectively. Senior year plans were obtained either in January or February of 1969. Seventh and ninth grade plans were coded into three categories: college; non-college; undecided. An "undecided" option was not available to students on the junior and senior year instruments (1=college; 0=other). For students present in all four waves of data collection a measure of the Duration of their educational goals was constructed, working backwards from the twelfth grade: (4) students who gave the same response (either college or non-college goals) in all four waves (7th, 9th, 11th, and 12th grades); (3) those whose responses in the last three waves were consistent but different from that given in the seventh grade; (2) those whose junior and senior goals agreed but were different from those held in the ninth grade; and (1) those whose plans in the senior and junior years differed. The "undecided" option in the seventh and ninth grades was considered inconsistent with either college or non-college goals. Students with missing data on any of the educational plans questions were not assigned duration values.

Application and Acceptance Statuses in the twelfth grade are dichotomous variables constructed from a single item on the senior questionnaire: "What is the present status of your plans?" Students were asked to respond to this item only if they planned to attend college. Three response options were available: (1) I have been accepted by at least one college; (2) I have applied for admission but have not as yet been accepted by a college; (3) I have not as yet applied for admission. A student received a "1" on application status if s/he answered either

"2" or "1" to this item, otherwise (a score of "3" or non-response) s/he received a zero. Similarly, a student was scored as having "1" on acceptance status only if s/he responded "1" on the item, otherwise a value of zero was assigned. Additional variables employed in regressions are:

Mother's and Father's Education, scaled in years;

Father's Occupation, coded into the SEI metric from an Edwards type census classification;

Acquisition Index, the total number of rooms in the respondent's home;

Race, with blacks coded "1" and non-blacks "0";

Sex, with women coded "1" and men "0";

Aptitude, composite score on ETS' School and College Abilities Test battery, administered during the junior year of high school;

Curriculum, obtained from student reports, with "college preparatory" coded "1" and all other tracks "0."

RESULTS

The ETS and NLS senior year surveys both included items asking whether the respondent had yet applied to any college and, if so, whether s/he had yet been accepted. Since the NLS fieldwork was conducted later in the academic year than was that for the ETS project (April, May and June as opposed to January and February), it should not be surprising that higher percentages of NLS respondents replied positively to both. These figures are presented in Table 1. Overall, some 47 percent of the NLS respondents had applied to college by the time of the senior year survey, and 41 percent had already been accepted.[3] The corresponding ETS percentages, though lower, also are far from negligible.

-- Table 1 About Here --

Even more impressive are the figures for the college-oriented students in these two samples. About sixty-two and sixty-six percent of the NLS and ETS students respectively indicated that they planned to attend college. Of these NLS students, some 73 percent had already applied and 64 percent already been accepted! Again, the ETS figures are lower, but still appreciable. Without doubt, of course, many students apply to and, as a consequence, are accepted into college <u>because</u> they are highly motivated to do so, but for many others such reported expectations may merely be statements of fact. With only the reports themselves available, these two meanings cannot be distinguished. Hence, we have here another demonstration that such reports may reflect simply either realism or resignation rather than ambition (Kerckhoff, 1977).

The ETS and NLS data also allow us to consider whether longstanding educational intentions differ in important respects from those of shorter duration. The literature on career aspirations reviewed earlier suggests that longstanding goals may reflect greater commitment and hence have greater motivational relevance.

-- Table 2 About Here --

Table 2 identifies when students' educational plans crystallized over their school careers. In the NLS survey these data on the duration of plans are measured retrospectively, while in the ETS project they are determined directly from repeated survey administrations. At least in this instance, then, the latter probably should be accorded greater credence.[4]

For most students, educational intentions are indeed longstanding. For some forty percent of the NLS respondents, these extend back <u>prior</u> to the tenth grade. In the ETS data just over half the respondents are found to have held their plans since the seventh grade. A somewhat different mode of presentation suggests the

general correspondence between these distributions. If the NLS figures are recalculated for only those who provided substantive responses (that is, excluding the 2646 "undecideds"), and categories are combined so that the grade comparisons are the same, we find that twenty-four percent of the NLS youth claim to have come upon their college plans during the twelfth grade, while seventy-seven percent did so earlier. In the ETS data the corresponding percentages are twenty and eighty.

Thus, both data sources are in agreement that the educational intentions of most youth firm up before the senior year of high school, and in many instances well before. On the other hand, a minority of youth do not conclude their educational planning much before the end of high school forces it upon them. The NLS data, in fact, suggest that even at this late date a good many students remain uncertain regarding their educational futures.

It thus becomes important to know whether college intentions so different in this regard also differ in their empirical character. If the concerns developed earlier regarding the possible diversity of meanings reflected in stated plans are at all warranted, then we would expect plans of longer duration to be more strongly related to behaviors aimed at their enactment and to eventual attainment levels. We also suspect that the educational goals reported by students who on an earlier item indicated they were uncertain regarding their intentions are especially lacking in substantive meaning. Hence, these should have little bearing on attainments. Table 3 and 4 test out these possibilities, first through cross-tabular analysis and then in a regression framework.[5]

-- Table 3 About Here --

Table 3 reports the percentages of students having applied to college, having been accepted into college, and actually having attended college, classified according

to their senior year plans and the longevity of those plans. Aside from the generally higher percentages for the NLS comparisons, which are anticipated owing to that project's later fieldwork, the ETS and NLS patterns again are quite similar. Both reveal a marked decrease in the percentages of college oriented students who undertake to gain admission, successfully do so, and, in the NLS, actually attend college as we progress from longstanding plans to those of more recent origin. While a decision not to attend college appears to be fairly binding regardless of the timing of that decision, the same can hardly be said of the decision to attend.

The last row of Table 3, for example, suggests that the influence of "plans" on attainments differs markedly depending upon what "kinds" of plans are at issue. Longstanding goals for college are quite likely to be translated into actual attendance. On the other hand, more recently formulated plans fare considerably poorer in forecasting college attendance, perhaps surprisingly so since they are developed nearer to this transition. In fact, there is almost a thirty percentage point difference in college attendance comparing twelfth grade college planners with students who have intended to go to college since before the tenth grade. Thus, students whose judgements are swayed by short-term situational cues appear to be both less strongly wedded to their educational goals and less adept in interpreting the circumstances that bear upon them.

Finally, the data from youth who answered on one question that they still were uncertain regarding their college plans but who nevertheless responded to a second regarding their educational expectations are especially lacking in predictive power. Of these students who indicated it was their intention to go to college,[6] fewer than half actually do so at any time during the first three years after high school graduation. This is almost twenty percentage points less than for any

other group of "college planners." These are substantial differences, and ones which would be completely unrecognized in conventional analyses of students' plans.[7]

-- Table 4 About Here --

A quite similar pattern is obtained when plans are considered within a regression framework of the sort common to status attainment research. Here we use only the NLS data, since the ETS project provided no information on the post-high school educational experiences of its sample. These results are presented in Table 4, the first panel of which pertains to the full sample. Under other circumstances, this first analysis well might have been presented for its substantive implications, and these seemingly provide strong support for the importance of motives for attainments. The equation includes measures of students' socioeconomic origins, race, sex, academic aptitude, curriculum placement and, lastly, educational plans as predictors of college attendance, not unlike many studies in this tradition. In this first estimation, the standardized plans coefficient is more than twice that of its nearest rival, curriculum membership (parallel equations for application and acceptance statuses for both the NLS and ETS respondents were estimated but are not presented. These, in general, correspond quite closely throughout to the results for actual attendance).

The results for youth with longstanding plans (i.e., the second and third panels) parallel those for the full sample. If anything, in fact, college goals actually are more valuable resources for these groups (compare metric coefficients). For senior year planners, however, plans are a good bit less consequential. For example, intending to go to college increases the likelihood of actually doing so by only .42 when that intention is come upon during the last year of high school, compared to .63 when it is formulated prior to the tenth grade.[8] Finally,

attainments are even less responsive to goals for those students whose goals have a rather ephemeral character. For these youth, college plans increase the probability of attendance by only .24, and their singular importance is hardly as impressive as in the other comparisons. Thus, our conclusions regarding both the relative and absolute importance of motives for educational attainment would differ notably across these various student groups, which ordinarily would be treated as homogeneous.[9]

Although conventional procedures for assessing goals sometimes may be adequate, these results suggest that they are most likely to be so for students whose plans firmed up relatively early in their academic careers. In this case, though, it would be quite mistaken to study educational goals as an outcome of high school, as typically is done. On the other hand, for students whose plans are formulated much closer to the termination of high school, stated intentions appear to load on many considerations, most of which are far removed from the researcher's intent. While in these instances it might make sense to relate such expressions to school experiences, we then encounter substantial problems of interpretation, for we clearly are at risk in assuming that such data reflect only, or even mainly, achievement dispositions with motivational relevance. Although none of this strikes us, in retrospect at least, as especially surprising, it nevertheless has rather sobering implications, for in practice we have no idea how these patterns are represented in our data and, therefore, how to properly interpret our results.

DISCUSSION

The preceding analyses imply, we believe, some rather serious deficiencies in conventional practices for evaluating social-psychological contributions to

educational and socioeconomic attainments. By implication, they as well make suspect the conventional wisdom supposedly sustained by those practices. Although these concerns apply most immediately to school process modeling in the tradition of that first advanced by Sewell and his colleagues (Sewell, Haller and Portes, 1969; Sewell, Haller and Ohlendorf, 1970; Sewell and Hauser, 1975), they hardly are limited to this literature. Woelfel and Haller, for example, provide impressive claims for the virtues of educational and occupational aspirations as dependent measures in research on attitude formation (1971:77):

> "Levels of educational and occupational aspirations are virtually ideal attitudes for this research, since they are relatively stable, long range, important to the individual who holds them, virtually universal to the subject population (high school students), ... and both are easily measurable with instruments of known validity and reliability."

Each of these assertions,[10] however, is rendered suspect by our findings. The plans of many students actually are quite unstable; for others they are seemingly nonexistant, or at least not sufficiently formulated to be elicited adequately through conventional survey items.

Once stated, these reservations regarding the naive use and interpretation of plans data hardly seem profound, in fact they border on being self-evident. How, then, could these deficiencies of procedure and/or conceptualization have gone unquestioned for so long? We suspect that several factors have contributed to this circumstance.

The initial Wisconsin formulation of such social-psychological mechanisms of educational and occupational attainment afforded an elegant integration of

longstanding sociological concerns with structural, interpersonal and subjective influences in the schooling process. This was nothing short of a theoretical tour de force, disarmingly simple yet remarkably encompassing. Unfortunately, however, the concepts of the framework did not receive the same thorough attention as did the relationships among them, and empirical assessments of the perspective often have been tediously operationalistic.[11]

This, of course, is hardly peculiar to status attainment research. To the contrary, this literature has been uncommonly self-reflective and self-corrective. Nevertheless, two considerations probably have combined to deflect attention from the sort of concerns raised in this report. First, the conclusions from this literature have been entirely plausible and consistent with expectations, results hardly likely to occasion excessive introspection. Second, there is no readily available schema that might be drawn upon to refine either conceptualization or instrumentation.

Regarding conceptualization, Mischel (1973:275) has characterized the dearth of theoretical insight on such matters in personality psychology as follows:

> "Although self-instructions and intention statements are likely to be essential components of an individual's plans... at present these topics provide the largest void and the greatest challenge in personality psychology."

In the absence of an explicit conceptualization of the nature of plans and of their role in the organization of behavior, it is not at all surprising that survey research on these and related constructs (intentions, motives, ambition, etc.) should resort to crude indicators. While such practices are, we believe, entirely defensible on pragmatic grounds, accepting their necessity does not imply license to ignore their implications.

In perhaps the most thorough theoretical treatment of plans currently available, Miller, Galanter and Pribram (1960) characterize plans broadly as "a rough sketch of some course of action." Plans, they argue, are analogous to computer programs, in that they specify a behavioral algorithm. This imagery immediately suggests some of the complexities that deserve attention in research on the relevance of plans for educational and socieconomic attainments. Is, for example, the plan at issue even in the respondent's repertoire of plans? We typically assume so (see the quote from Woelfel and Haller), but perhaps greater caution is in order. Even if the student possesses a relevant plan is s/he executing it? An unexecuted plan, even if remarkably adept in its conception, is by definition ineffectual. Moreover, the plan itself reveals little regarding the values and motives that might govern either its execution or its priority among competing plans. While it is beyond the scope of the present effort to provide a comprehensive organization of such constructs, it should by now be obvious how much is blurred over in using simple statements of educational intent as though they revealed not only plan, motive and value, but also their cognitive organization.

We hope that the reservations developed in this report regarding available research on social-psychological contributions to status attainment will stimulate further thought and study, for the issues themselves are critically important and deserving of the most rigorous assessment possible. Although the fine-detail of what such an assessment might look like remains to be worked out, we think it clear that it will have to draw upon much richer information on students' intentions and ambition and attempt a much more elaborate conceptual organization of those data. The existing literature is deficient on both these counts.

FOOTNOTES

1. This figure is about the extent of item non-response typically obtained in surveys of students' occupational plans/goals -- usually on the order of twenty to thirty percent. Although such students ordinarily are set aside as missing data cases, it may well be that their non-responses meaningfully reflect their level of career planning.

2. In preliminary analyses we also considered full-time attendance as an alternative criterion, but the results for it were practically identical to those reported for "any attendance," and hence are not included in the tables that follow.

3. These figures, impressive as they are, likely underestimate the number of students who are well informed regarding the likelihood that they will go to college in that we have no information on the rejections received by students who have applied.

4. Of course, these NLS and ETS data differ in many respects and exact correspondance is hardly to be expected. In addition to differences in sampling procedures and the cohorts represented, the NLS data are likely subject to substantial errors of recall, while the successive reports of plans from which the ETS item was constructed probably are differentially reliable. Additionally, grade-referents are not identical and the NLS youth had available an "undecided" option in the duration question.

5. Scaling plans simply according to their duration hardly exhausts all that might be of interest in the patterning of students' answers to such questions

across their academic careers. In fact, any one of our "duration" categories likely subsumes important differences in how students came upon their specific intentions. Our present concerns, however, do not require that we assess all possible response patterns, however worthwhile such an exercise might be for other purposes. Since our categories are themselves likely quite heterogeneous in the meaning of the plans each subsumes, the differences they do reveal probably underestimate the conceptual ambiguities in such intentions data. This suits our present purposes quite adequately, even though it clearly is not all that could be done on the matter.

6. Almost 40 percent of the approximately 2600 students who indicated on the duration question that they still were uncertain regarding their college plans did in fact skip the question specifically asking their level of expected educational attainment.

7. A log-linear analysis of the five 4x2x2 cross-classifications implied by the rows of Table 3 revealed consistently significant three-way interactions. The χ^2 values for the models which fit all marginals and two-way interactions range between 8.508 (for the ETS data on application status) and 252.75 (for the NLS data on attendance). The saturated model, which adds the three-way interaction, would exactly reproduce the observed cell entries, shrinking these χ^2 values to zero. With three degrees of freedom, the χ^2 thus accounted for by the three-way interaction would in each instance be significant at conventional levels. Substantively, these results indicate that the relationship of plans to these other outcomes actually increases significantly as we move from more recent to more longstanding intentions.

8. In reacting to an earlier version of this paper, a reader remarked that such differences across duration categories may reflect simply the certainty and/or intensity with which plans are held. Hence, "duration" may merely be a dimension of plans, akin to the intensity-direction distinction common in attitude theory. No doubt there is merit in this interpretation, which underscores the conceptual inadequacy of most work with simple plans responses. At the same time, however, it does not provide a basis for distinguishing reports from ambitions, or either of these from either free associations or epiphenomena. We will return to the need for a more cogent conceptual accounting of planning and enactment in the discussion.

9. A great deal of additional analyses along these lines have been conducted but are not reported owing to space limitations. For both data sets, regressions in which application and acceptance statuses are the dependent variables have been examined, as have runs in which educational plans itself is the criterion. The general patterns and implications obtained here for college attainment are observed across <u>all</u> of these analyses, with plans being both more important and more determined the more longstanding they are.

Since the NLS and ETS operationalizations of duration are so dissimilar, it is unlikely that any simple method artifact accounts for this pattern. Even in the ETS data, in fact, we are skeptical that differences across duration categories reflect merely differing reliabilities of the various plans measurements, as a reader of an earlier version of this paper has suggested. Plans of longer duration actually are <u>more</u> important, despite their having been obtained initially at earlier grade levels. Since it is reasonable, in general, to assume that the reports of younger children will be more error-laden than those of more mature youth, greater attenuation might well be expected for the effects of earlier, not

later, reports. Although we hope in later substantive work with these data to give more formal consideration to issues of indicator reliability and stability, in terms of our immediate concerns we doubt that their neglect here is serious.

10. Woelfel and Haller's claim regarding reliability and validity of instrumentation presumably is made with reference to their own procedures, which indeed are more refined than most. Nevertheless, the questions we are raising apply to all of the survey research on these issues with which we are familiar.

11. This criticism applies equally to our own substantive work on these topics.

Table 1. Percentages Applying to College and Having Been Accepted by College at the Time of the NLS and ETS Senior Year Surveys

	NLS		ETS	
	% Applied	% Accepted	% Applied	% Accepted
For Total Sample	46.8 (10720)	41.3 (10720)	41.3 (3934)[a]	14.0 (3934)
For Those Planning to Go to College	73.1 (6642)	64.5 (6642)	61.2 (2591)	20.8 (2591)

[a]The ETS total N of 3934 represents 92 percent of all students who took the senior questionnaire.

Table 2. NLS and ETS Distributions on the Duration of Educational Plans

NLS	%	N	ETS[a]	%	N
Prior to 10th Grade	42.8%	6000	By 7th Grade	51.2%	872
10th or 11th Grade	19.8	2776	By 9th Grade	14.2	241
12th Grade	18.6	2610	By 11th Grade	14.8	252
Still Undecided	18.9	2646	In 12th Grade	19.8	337
Sample N		14032	Sample N		1702[b]

[a] Here students are included only if they had valid data on all four educational plans measures. Consistency was calculated backwards from the twelfth grade to place the student in the proper category; see the text for procedures to group students in these categories.

[b] The 2232 persons included in Table 1 but not here were lost due to lack of data on goals prior to the senior year. The N of 1702 reflects 78 percent of all students who took the BEQ in grades 7, 9, and 11 as well as the senior questionnaire.

Table 3. Relationships of Application, Acceptance, and Attendance Statuses to Plans, Grouped According to the Duration of Plans, for both NLS and ETS Respondents

ETS SAMPLE

Duration of Plans	Plans by 7th Grade		Plans by 9th Grade		Plans by 11th Grade		Plans by 12th Grade	
Type of Plan :	College Oriented YES	NO	College Oriented YES	NO	College Oriented YES	NO	College Oriented YES	NO
% Apply to College	76.7%	0.0%	63.5%	2.3%	51.4%	0.7%	53.8%	6.8%
N	(807)	(65)	(197)	(44)	(107)	(145)	(117)	(220)
% Accepted by College	32.2%	0.0%	25.9%	2.3%	22.4%	0.7%	14.5%	3.2%
N	(807)	(65)	(197)	(44)	(107)	(145)	(117)	(220)

NLS SAMPLE

Duration of Plans	Prior to 10th Grade		In 10th or 11th Grade		In 12th Grade		Still Undecided	
Type of Plan :	College Oriented YES	NO	College Oriented YES	NO	College Oriented YES	NO	College Oriented YES	NO
% Apply to College	82.8%	6.3%	72.8%	4.8%	53.2%	3.8%	18.2%	1.7%
N	(4204)	(814)	(1145)	(967)	(853)	(1034)	(428)	(1193)
% Accepted by College	75.0%	5.3%	62.3%	4.0%	42.3%	3.1%	11.2%	1.1%
N	(4204)	(814)	(1145)	(967)	(853)	(1034)	(428)	(1193)
% Attended College	89.3%	11.9%	78.4%	11.7%	60.9%	14.4%	44.0%	12.6%
N	(4200)	(807)	(1140)	(957)	(850)	(1017)	(425)	(1171)

Table 4. NLS Analysis of the Importance of Educational Plans for College Attendance, Grouped According to the Duration of Plans[a]

Educational Outcome	Acquis Index	Fath Occ	Moth Ed	Fath Ed	Race	Sex	Apt	Curric	Ed Plans	R^2 With Plans	R^2 No Plans
Total Sample (N=9659)											
Attend College	.038* (.011)	.038* (.001)	.028 (.005)	.031* (.004)	.046* (.085)	-.005 (-.005)	.098* (.002)	.157 (.156)	.522* (.536)	.510	.329
Plans Prior to 10th Grade (N=4651)											
Attend College	.035* (.009)	.037* (.001)	.010 (.001)	.027 (.003)	.023* (.038)	.009 (.008)	.071* (.001)	.154* (.142)	.550* (.627)	.503	.303
Plans in 10th-11th Grades (N=1900)											
Attend College	.034 (.010)	.034 (.001)	.027 (.005)	.028 (.004)	.068* (.124)	-.010 (-.010)	.065* (.001)	.116* (.117)	.588* (.589)	.495	.235
Plans in 12th Grade (N=1659)											
Attend College	.033 (.009)	.025 (.001)	.067* (.010)	.021 (.003)	.045* (.086)	-.017 (-.017)	.103* (.002)	.087* (.088)	.438* (.423)	.295	.128
Still Undecided (N=1379)											
Attend College	.034 (.008)	.035 (.001)	-.003 (-.000)	.061 (.006)	.066* (.084)	-.040 (-.033)	.143* (.002)	.110* (.107)	.262* (.241)	.173	.118

*Coefficient greater than or equal to 1.96 times its standard error.

[a]Standardized coefficients; metric coefficients in parentheses

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